

Zoom

Zoom to a pre-defined window for the graph of a function.

We will use the function $f(x) = 5x - 6$.

Keystrokes

Screen

Enter in the function $f(x) = 5x - 6$


Y = 5 **X,T,θ,n** **-** 6

```
Plot1 Plot2 Plot3
Y1=5X-6
Y2=
Y3=
Y4=
Y5=
Y6=
Y7=
```

View the ZOOM menu:

[ZOOM]

```
MEMORY
1:ZBox
2:Zoom In
3:Zoom Out
4:ZDecimal
5:ZSquare
6:ZStandard
7↓ZTrig
```

*Note: The arrow present after the number 7 at the bottom of the screen means that there are more options in this menu. You can press the number associated with an option or use the arrow key  and **ENTER** to select an option.*

Press **6** to select ZStandard which sets Xmin = -10, Xmax = 10, Ymin = -10, and Ymax = 10. The Xscl and Yscl remain unchanged.

6

```
MEMORY
1:ZBox
2:Zoom In
3:Zoom Out
4:ZDecimal
5:ZSquare
6:ZStandard
7↓ZTrig
```

Look at the window settings:

WINDOW

```
WINDOW
Xmin=-10
Xmax=10
Xscl=1
Ymin=-10
Ymax=10
Yscl=1
Xres=1
```

Press **1** to select ZBox which defines a viewing window by selecting the corners of the box.

1  (10 times) **ENTER**  (10 times) 
(20 times) **ENTER**

```
MEMORY
1:ZBox
2:Zoom In
3:Zoom Out
4:ZDecimal
5:ZSquare
6:ZStandard
7↓ZTrig
```

More questions? Contact the **Metropolitan State University Math Center** at
651-793-1460, 651-793-1463 (Fax) or math.center@metrostate.edu.

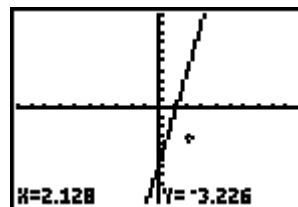
Persons with a disability who need reasonable accommodations may call Disability Services at 651-793-1540 or 651-772-7687 (TTY).

Keystrokes

Screen

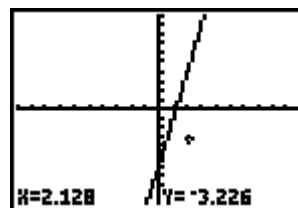
Press **2** to select ZoomIN which displays a smaller viewing area of the graph (magnifying the current graph).

2 **ENTER**



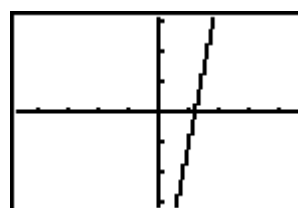
Press **3** to select ZoomOut which displays a larger viewing area of the graph (reducing the current graph).

3 **ENTER**



Press **4** to select ZDecimal which sets $X_{min} = -4.7$, $X_{max} = 4.7$, $Y_{min} = -3.1$, and $Y_{max} = 3.1$. Each pixel represents 0.1 units. The tic marks on each axis are equally spaced.

4



Look at the window:

WINDOW

```
WINDOW
Xmin=-4.7
Xmax=4.7
Xscl=1
Ymin=-3.1
Ymax=3.1
Yscl=1
Xres=1
```

Press **5** to select ZSquare which adjusts X_{min} and X_{max} so that the tic marks on the x -axis are spaced the same as those on the y -axis.

5



Look at the window:

WINDOW

```
WINDOW
Xmin=-4.7
Xmax=4.7
Xscl=1
Ymin=-3.1
Ymax=3.1
Yscl=1
Xres=1
```

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Keystrokes

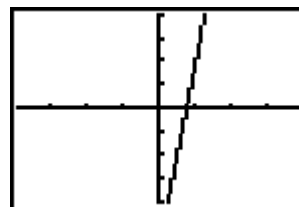
Screen

Press **7** to select ZTrig which sets $X_{\min} = -6.152285$ (about -2π), $X_{\max} = 6.152285$ (about 2π), $X_{\text{scl}} = 1.5707963$ (about $\pi/2$), $Y_{\min} = -4$, $Y_{\max} = 4$, and $Y_{\text{scl}} = 1$ in radian mode. In degree mode, $X_{\min} = -352.5$, $X_{\max} = 352.5$, $X_{\text{scl}} = 90$.

7

Look at the window:

WINDOW



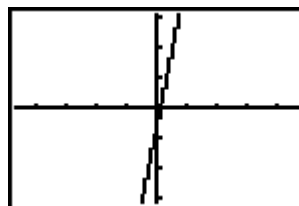
```

WINDOW
Xmin=-6.152285...
Xmax=6.1522856...
Xscl=1.5707963...
Ymin=-4
Ymax=4
Yscl=1
Xres=1

```

Press **8** to select ZInteger which sets $X_{\text{scl}} = 10$ and $Y_{\text{scl}} = 10$ and centers the graph with integer endpoints.

8 **ENTER**



Look at the window:

WINDOW

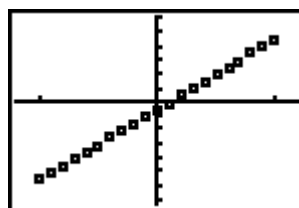
```

WINDOW
Xmin=-47
Xmax=47
Xscl=10
Ymin=-31
Ymax=31
Yscl=10
Xres=1

```

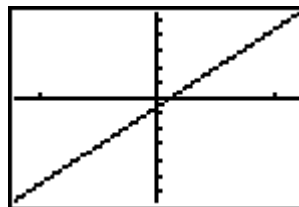
Press **9** to select ZoomStat which defines the viewing window so that all data points are shown on the STAT PLOT.

9



Press **0** to select ZoomFit which adjusts Y_{\min} and Y_{\max} to include the minimum and maximum y -values for the selected functions on the x -interval, if they exist.

0



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